INCIDENT

Aircraft Type and Registration:	Airbus A320-214, G-EZTZ	
No & Type of Engines:	2 CFM56-5B4/3 turbofan engines	
Year of Manufacture:	2011 (Serial no: 4556)	
Date & Time (UTC):	16 February 2016 at 0825 hrs	
Location:	Amsterdam Schiphol Airport	
Type of Flight:	Commercial Air Transport (Passenger)	
Persons on Board:	Crew - 6	Passengers - 167
Injuries:	Crew - None	Passengers - None
Nature of Damage:	None	
Commander's Licence:	Airline Transport Pilot's Licence	
Commander's Age:	45 years	
Commander's Flying Experience:	13,800 hours (of which 11,100 were on type) Last 90 days - 99 hours Last 28 days - 40 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot and Safety Investigation Report produced by the Operator	

Synopsis

After lift-off, the commander retracted the flap instead of the landing gear. Realising his mistake, he immediately returned the flap lever to its previous position and the aircraft continued to climb without further incident.

History of the flight

G-EZTZ was operating a scheduled Commercial Air Transport (CAT) flight with six crew and 167 passengers on board. The co-pilot was the Pilot Flying (PF). The crew reported that the takeoff was normal but when, after lift-off, the PF asked the Pilot Monitoring (PM) to select the landing gear to UP, he moved the flap lever to position 0 instead. The PM realised his error immediately, returned the lever to position 1 and told the PF what he had done. The PF reduced the nose attitude of the aircraft, maintained a positive rate of climb and the airspeed did not decrease below VLS (the lowest selectable IAS). The aircraft continued to its destination without further incident.

VLS is computed by the Flight Augmentation Computer (FAC) and displayed on the PFD as the top of a vertical amber strip along the airspeed scale. VLS corresponds to:

a. 1.13 times the stalling speed during takeoff.

b. 1.28 times the stalling speed in the clean configuration.

Flap system logic

The departure was flown with flaps and slats set to Config 1 + F (18° of slats and 10° of flaps). After takeoff, when the flap lever was moved to position 0, the flaps began to retract but the slats remained in position 1 initially. The slats would have retracted subsequently but, because the PM immediately moved the flap lever back to position 1, they remained extended. In flight, moving the flap lever from position 0 to 1 extends the slats but does not normally extend the flaps ie Config 1 is commanded rather than Config 1 + F. In this case, although the PM moved the flap lever back to position 1, the flaps continued to retract.

Human factors

The operator classified the mis-selection of flap rather than landing gear as an *'action slip'*. The PM intended to carry out the correct action but, during the execution phase, did something different. The report stated:

> *'Tasks which are highly practiced, routine and largely physical actions are more vulnerable to action slips than more cognitively demanding tasks. These well-practiced tasks are linked with automatic processing where* [we can do the task] *'without thinking'. Our ability … to automate our processing* [allows] *us to develop expertise and create the cognitive capacity to process more complex tasks. However, it can also leave us vulnerable to making errors in relatively simple tasks'.*

The operator noted that this was not an isolated event[1], which confirmed that flight crew, in general, are vulnerable to this type of slip.

Footnote

[1] See report Reference EW/G2016/02/10 in AAIB Bulletin 8/2016.